

Minnesota State University Moorhead

CM 340: Planning and Scheduling

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:

CM 230 - Estimating I: Quantity Survey

Corequisites: None

MnTC Goals: None

Theories and principles of construction planning and scheduling will be studied. Students will use the Critical Path Method as a primary technique of planning, scheduling, and monitoring work. Agile project management techniques and lean construction concepts are incorporated into assignments and projects. The students will identify required activities, resources and costs required to complete and monitor a project throughout the construction process. Students will be required to complete both manual and computer scheduling assignments.

B. COURSE EFFECTIVE DATES: 02/02/2020 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Identify changes that occur throughout the project and explain the impact of changes on the schedule costs and resources
2. Determine work completed to date and forecast the costs and resources needed to complete the project
3. Concepts of resource leveling, resource allocations and resource management
4. Explain the process of monitoring changes that occur throughout the project
5. Impact of changes on the schedule costs and resources
6. Cost control procedures needed to successfully complete and document a project
7. Short interval scheduling (SIS)
8. Linear scheduling
9. Impact of scheduling decisions on productivity
10. CPM in dispute resolution and litigation
11. Knowledge and understanding of construction planning and scheduling terms and concepts
12. Network scheduling
13. Various types of schedules and their application to construction
14. Scheduling requirements in the contract provisions
15. Project manager's role and responsibility in relation to construction planning, scheduling, and administration
16. CPM network calculations
17. Perform activity durations calculations
18. Convert construction estimate to scheduling tasks

D. LEARNING OUTCOMES (General)

1. The student will demonstrate their knowledge and understanding of construction planning and scheduling; the various types of schedules used in the construction processes; time and contract provisions; converting a construction estimate to scheduling activities; and manager's role and responsibility in relation to construction planning, and scheduling.
2. The student will demonstrate their knowledge and understanding of cost control, resource management, and forecasting costs and resources needed to complete the project.
3. Students will be able to plan and create a construction project schedule.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted